Golden Timber Supply Area
Timber Supply Review

Summary of Public Input

BC Ministry of Forests
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This is a summary of the public input received on the Timber Supply Review in the Golden Timber Supply Area. This summary does not assess the feasibility or validity of the input or whether it relates to the clearly defined mandate of the chief forester in the allowable annual cut determination.

Golden Timber Supply Area

Background

As part of the review of timber supply in the Golden Timber Supply Area, two opportunities were provided for public input. The first followed release of the Golden Timber Supply Area *Data Package* and *Information Report* in September 1997. The information report was a non-technical summary of the draft data and management assumptions that were to be applied in reviewing the timber supply for the Golden Timber Supply Area. A 30-day review period, ending October 27, 1997, was provided for the public to comment on these documents.

On August 26, 1998, the British Columbia Forest Service released the *Golden Timber Supply Area Analysis Report* and *Public Discussion Paper*. The public was encouraged to review and comment on the accuracy of the information in these documents and to provide additional information during the 60-day review period that ended October 26, 1998.

This report summarizes the input received during both public review periods. This information was provided to the chief forester for his consideration when he reviewed the allowable annual cut for the Golden Timber Supply Area. The first section of this summary outlines the public review process implemented by the Forest Service, and describes the types of public input received. The second section summarizes the public input in sufficient detail to indicate the range of input received. The original submissions (with personal identifiers removed in accordance with the *Freedom of Information and Protection of Privacy Act*) can be reviewed at the Columbia Forest District office.

Public Review Process and Response

Columbia District staff actively solicited public input on the Timber Supply Review in the Golden Timber Supply Area through the following actions:

- direct mail-out of the *Information Report*, *Data Package* and *Public Discussion Paper* to key organizations in the Golden Timber Supply Area or adjacent timber supply areas.
- the *Data Package* and the *Golden Timber Supply Analysis Report* were available at the district office.
- meetings regarding both the *Data Package* and *Analysis* Report were held with representatives from local government, the forest industry and other interest groups, as well as individuals.
- a meeting was held with the local newspapers to encourage articles.

As Table 1 shows, more than 23 individuals attended the information sessions. The Columbia Forest District also received six written submissions on the *Data Package* and 18 submissions on the *Timber Supply Analysis Report* (see Appendix 1).

Activity (No. of participants)	**Date**
Information sessions	
Elected officials	
Local government (8)	Sept. 1997 & Sept. 1998
Interest groups	
Evans Forest Products (4)	Sept. 29, 1998
Professional foresters (5)	Sept. 30, 1998
East Kootenay Environmental Society (4)	Oct. 7, 1998
Other	
Media:Golden Star and Golden News (2)	Aug. 26, 1998
Individual meetings	Sept./Oct. 1998

Table 1: Participation in public information activities

Public Input

In this section, public input on the information presented in the Timber Supply Review documents for the Golden Timber Supply Area is summarized under the following headings:

- Data Package (and Information Report)
- Timber Supply Area Analysis Report (and Public Discussion Paper)
- Other comments

Data Package

Forest Inventory Factors

Four submissions comment on the reliability of inventory information used in the timber supply analysis, one noting that the inventory audit of existing mature stands is only partially completed. Given recent harvesting, two submissions suggest the Ministry of Forests' forest cover maps should be updated to 1997 (not 1994 as indicated in the *Data Package*). Parks Canada expresses a concern about the use of 1956 cover maps for National Parks.

The forest industry submission asks for confirmation that federal parks forest cover is included in the analysis and questions how it will be used in meeting constraints for visual quality, ungulates, watersheds and forest cover. An individual submission notes that the 20-year spatial plan showing timber availability has not been completed.

Land Base Factors

Three submissions suggest that the entire Cummins River drainage should be excluded from the timber harvesting land base, even if full legislative protection is not yet completed for the lower portion. One notes that the Wildlife Management Area of the Columbia River should also be identified and excluded from the land base. Two other submissions suggest that areas not yet classified as operable or inoperable (code N) should remain in the land base and be excluded later if appropriate.

One submission from the East Kootenay Environmental Society (EKES) expresses concern about overly optimistic assumptions about areas that might be included as "opportunity wood" and asks whether the operability line has changed since the last Timber Supply Review. Both submissions from the environmental society say problem forest types must be excluded from the analysis.

Three submissions comment on the reduction in the land base to account for losses to roads and landings. EKES is of the opinion that since most roads and landings are on the best growing sites, a four per cent netdown is inadequate to compensate for lost productivity. Two forest industry submissions say the reductions are excessive. They maintain the reduction should be based on a 10-metre road width (not 16 or 18 metres) and question the Forest Service's statement that wider rights-of-way will be required in the future by the Forest Practices Code. They also note Code requirements for rehabilitation of trails and landings to return them to productivity.

Evans Forest Products states its disagreement with the *Data Package* assumption that, while some harvesting will occur above the operability line, at least an equivalent area below the line will be designated inoperable at the time of operational planning. Evans says this assumption is based on a small, non-representative portion of the timber supply area.

Expected Rate of Growth and Productivity

Evans Forest Products and the Interior Lumber Manufacturers' Association (ILMA) say the results of the Old Growth Site Index study should be incorporated in the analysis, allowing substantial increases in predicted growth for spruce and lodgepole pine. An EKES submission says this information should only be applied to those species

for which it's been validated.

The ILMA and EKES both request the rationale for factors used to account for natural agents that create gaps or delay growth, including root rot. The environmental society also questions how yield curves were statistically validated and what approach was used for partial cuts.

Five submissions say the results from the new study on decay, waste and breakage factors must be incorporated in the analysis in order to improve productivity estimates.

Minimum Harvestable Age

The two submissions from EKES question the reduction in minimum harvestable age and its impact on achieving old growth targets. Two forest industry submissions express concern that the minimum volumes and diameters used to determine this factor will extend the minimum harvest age of many poor stands beyond what is reasonable.

Regeneration Delay

One submission from a consultant notes that the evaluation of high elevation reforestation success has not been completed. The two EKES submissions say the regeneration delay is overly optimistic and longer delays need to be modelled for higher elevation stands and for stands in the north end of the timber supply area. The ILMA submission says concern about regeneration delay and growth is more than adequately addressed by the 90 per cent reduction of areas designated in the forest cover inventory as having regeneration problems.

Biodiversity

Evans Forest Products, the ILMA and Parks Canada state opposition to the use of weighted average targets for biodiversity emphasis. The forest industry submissions say the biodiversity emphasis options assigned to all landscape units through the Kootenay-Boundary Land Use Planning process should be used as these are more accurate and real than artificial targets. Parks Canada says high emphasis for special management areas should be modelled as that reflects the planned intent for these areas.

Three submissions say the analysis must be based on a proportional representation of old growth requirements. EKES says old growth cannot be limited to inoperable or protected areas within a landscape unit, but must be represented across the landscape. The environmental society and Parks Canada say Old Growth Management Areas have been mapped and should be used to achieve this representation.

Parks Canada and EKES express concerns about using private land, inoperable areas, high elevation forest types and national park lands to meet old growth targets. Parks Canada says the analysis can't assume that forests in parks will always be mature or old growth since parks are managed on the basis of natural disturbance regimes. As well they say connectivity and interior forest conditions must be preserved to protect biodiversity, and recommend networks of mature timber (FENs) be modelled as current practice.

With regard to riparian areas, EKES says reserves and management zones must be strictly adhered to along the Wildlife Management Area of the Columbia River and along other streams. Alternative harvesting methods must be considered to allow for adequate retention. The ILMA submission suggests that a volume reduction rather than a land base removal to allow for riparian area management may be more appropriate.

Wildlife

Three submissions comment on wildlife trees and wildlife tree patches. Evans Forest Products says up to 50 per cent of wildlife tree requirements can be met from the non-contributing forest land base. EKES asks for the rationale on how wildlife tree

impacts are modelled.

Parks Canada asks that caribou guidelines be applied to a slightly expanded area from Caribou Creek north through to the Sullivan River. EKES' submission says that because so little information is available on caribou populations, guidelines must be applied to any areas anticipated to provide current and future habitat. They also ask how habitat and winter range are being modelled spatially. The environmental society also expresses concern about the lack of guidelines to protect grizzly bears.

The ILMA submission says changes are needed to ungulate constraints to meet conditions of the recent Memorandum of Understanding signed by the ministries of forests and environment.

Forest Cover Requirements

Evans Forest Products proposes situations where portions of a park should contribute to meeting forest cover requirements. In their submission, the ILMA expresses a concern that a sensitivity analysis for green-up is not proposed, despite the existence of empirical data on green-up from the AAC Mitigation Team (including problem types, such as high elevation and root rot-infested stands).

Both EKES submissions express concern that the modelling method does not appear to acknowledge forest cover constraints that will occur at the operational level. They ask for further information on green-up assumptions, and say the reduction of green-up height from three to two metres must only be assumed in the Integrated Resource Management Zone and must consider hydrological impacts.

Non-Recoverable Losses

The ILMA and Evans Forest Products say the allowance for total losses is too high. Evans' submission says the allowance doesn't recognize the reduced reliance on broadcast burning and that most areas not salvaged are left because of low timber volumes. They also say the assumption that losses will remain constant over time is inaccurate. The ILMA says the allowance for fire losses is high and may be biased by recent abnormal fire events. They recommend a protocol to reduce the allowance over time as stands being managed become younger.

Parks Canada expresses the opinion that given the extent of mountain pine beetle infestations, the estimate of losses may be too low. EKES questions how root rot is accounted for

Timber Supply Area Analysis Report

Forest Inventory Factors

One Parks Canada submission maintains that timber inventory results are not an accurate reflection of current volumes, pointing out that industry cruise data is showing 10 to 20 per cent less volume than the inventory estimates.

A second Parks Canada submission points out that 1956 parks forest cover maps were updated through generalized aging but were not reviewed by Parks Canada to identify major natural disturbance events that have occurred. Secondly, Ministry of Forests inventory files were updated to January 1, 1994, and Parks Canada points out that considerable activity has occurred since then.

Land Base Factors

Three submissions question how the analysis defines and deals with sites with low growing potential. A consultant raises detailed questions on the methodology in the analysis and recommends that low sites be those defined in *Site Index Estimates by Site Series for Coniferous Tree Species of BC*. Two forest industry submissions express the opinion that the reduction in the land base for low productivity is likely overestimated,

given the results of the Old Growth Site Index study. Evans Forest Products says the agreement that the minimum volume for all species was 150 cubic metres per hectare was deviated from in the analysis.

The BC Environmental Network's submission questions why uneconomic timber in the northern part of the timber supply area remains part of the timber harvesting land base when companies cannot afford to log it. A forestry consultant says the upper Wood River and Clemenceau Creek areas should be reclassified to operable, and that problem forest types should be included in the land base calculation as they are being harvested by licensees and the Small Business Program. The ILMA questions whether the review of operability directed by the chief forester during the previous Timber Supply Review has been completed. Evans Forest Products asks to review the results of the forest district's review of silviculture prescriptions that may result in a further reduction of the operable land base.

The submissions from the ILMA and Evans Forest Products maintain the reductions in the land base to reflect losses to roads, trails and landings are excessive compared to the rest of province. They suggest road widths used in the calculation are too great, and a more systematic and measurable approach is needed for this factor.

Two submissions say the areas in Forest Ecosystem Networks and Old Growth Management Areas should either be excluded from the timber harvesting land base or should be modelled using an extended rotation. They say it's likely these areas will remain unharvested over extended rotations to meet other resource objectives. The ILMA says removals from the land base for biodiversity are derived differently in this timber supply area than elsewhere in the province, resulting in a significantly higher reduction.

Expected Rate of Growth and Volume Estimates

Three submissions question the estimates of future productivity for managed stands. They say knowledge of managed stands is limited to the past 25 years and the reliability of these stands is yet to be proven. In addition, one submission says no data exists to support the yield estimates of mixed species managed stands. Four submissions express confidence that the productivity of regenerated stands is considerably higher than that of old-growth stands. They say the results of the Old Growth Site Index study confirming this should be incorporated in this analysis. The BC Environmental Network's submission says that study's methodology has been previously challenged.

A consultant's submission notes the increase in deciduous types in this analysis, and suggests that sites that are aspen-leading and that were harvested prior to 1987 will need to be treated to ensure they achieve free-to-grow status in a reasonable time. Growth estimates need to be adjusted to reflect this delay, according to her submission.

A Parks Canada submission says the assumption in the analysis that future stands will be 100 per cent stocked with conifers may be overly optimistic given the presence of endemic disease and insects, and stress due to ongoing climate change. The submission says research indicates a major deciduous component with more variable stocking levels (i.e. unmanaged stands) result in thriftier stands in the Interior Cedar-Hemlock Zone.

A consultant's submission notes that the effects of global warming were not accounted for in the analysis. She says predicted increases in temperature and decreases in precipitation will mean more drought-stressed trees that are susceptible to insect and diseases. Global warming

will also affect regeneration success, growth and mortality of plants, and the composition of ecosystems, according to this submission.

Minimum Harvestable Age

Wood River Forest Inc. says reasons to be optimistic about reducing the minimum harvestable age include improved silvicultural practices, very favourable growing conditions, and increasing acceptance of engineered wood products.

A consultant's submission points out that if minimum harvest age is reduced significantly it will be difficult to reach old growth targets.

Biodiversity and Old Growth

Three submissions maintain that biodiversity guidelines must be applied proportionally by landscape unit as defined in the Kootenay-Boundary Land Use Plan and Implementation Strategy. They say the intention of old growth management is to ensure adequate representation of habitat and that averaging old growth requirements across the landscape does not achieve this. Evans Forest Products says the guidelines, when applied proportionally, create negative timber supply impacts. They are of the opinion the guidelines should be applied non-proportionally as in the rest of the province.

Four submissions express concern about trying to meet old growth requirements only in parks (which are not managed for biodiversity) and inoperable areas (largely high elevations and steep slopes). In particular they note that the assumption in the analysis that trees outside the timber harvesting land base will continue to age is indefensible. Parks Canada says stands within national parks are managed on the basis of natural disturbance regimes with expanding prescribed burn programs to compensate for past fire suppression. Insect attacks and wildfires can also destroy older age classes, making them unavailable to meet biodiversity guidelines.

A forestry consultant says the land base associated with the proposed Cummins Provincial Park should be included when applying biodiversity guidelines. Parks Canada expresses concern about the intensification of harvesting adjacent to parks. They says this affects their ability to manage for ecological integrity within parks and to cooperatively manage for a healthy regional ecosystem.

EKES says more information is needed on the combined effects on biodiversity of converting old forests into managed stands, while opening up front- and back-country to tourism. The BC Environmental Network notes that no analysis was done of the impact of the base case harvest level on wildlife and biodiversity.

Wildlife

Evans Forest Products' submission says the ungulate winter range guidelines outlined in the Kootenay-Boundary Land Use Plan would have a negative effect on timber supply and should be withdrawn in favour of Forest Practices Code requirements only. EKES notes that the Ministry of Environment recommended a six-pass rotation to better ensure adequate range and says this should be incorporated in the analysis.

A forestry consultant says blanket caribou constraints should not be applied in Supply Block A of the timber supply area, as a distinct caribou herd has not been identified. Wood River Forest Inc. says the caribou habitat designation in the Wood River drainage, as defined in the Kootenay-Boundary Land Use Plan, needs review. The company says no data exists to support the resulting negative impact on timber supply. Parks Canada expresses the opinion that the zone currently occupied by caribou was not modelled in the timber supply analysis

Evans Forest Products says it disagrees with

the 4.7 per cent reduction in yield to account for wildlife tree patches located within cut blocks. The company says this is an overestimation based on a review of a small portion of the timber supply area. Parks Canada is of the opinion that the Forest Practices Code requirements regarding wildlife tree patches have been reduced to an inadequate level.

Two submissions note that no impact analysis was completed to show that maintaining the base case timber supply will not have a negative impact on wildlife. Parks Canada says overall that biodiversity measures in the Golden Timber Supply Area do not adequately address the needs of old-growth dependent species (except caribou). They point to a critical need for the establishment of designated old-growth management areas and forest ecosystem networks to connect habitat across the landscape.

Forest Cover and Green-up Requirements

Evans Forest Products and the ILMA express concern that green-up ages used in the analysis were derived from yield curves, rather than district-specific information. They point out the availability of results from the work of the AAC Mitigation Team which they say indicates green-up ages are less than those coming from yield curves. Using these numbers would increase short-term timber availability, according to Evans Forest Products.

In their submission, EKES says there is more uncertainty around green-up ages than the analysis indicates, and they suggest a conservative approach rather than placing at risk other future forest values. The society also notes that climate change will contribute to longer green-up times and that the Kootenay-Boundary Land Use Plan says the two-metre green-up height cannot be applied across the district but only on a block by block basis.

Visually Sensitive Areas

A consultant's submission says increasing the allowable disturbance in highly visible areas (from 15 per cent to 25 per cent) may mean foregoing future tourism opportunities and may increase windthrow and the subsequent disturbance from salvage logging. This submission also says partial cutting to meet visual objectives in areas with armillaria root rot will accelerate the spread of the disease.

Evans Forest Products says the analysis ignores the opportunity for partial cutting in visually sensitive areas, which would likely have a positive impact on timber. The company says they do not accept any further negative impact on timber supply to achieve visual quality objectives. The ILMA also questions the approach in this timber supply area to designate all visually sensitive areas as Partial Retention, compared to the province-wide effort to rationalize visual quality with timber supply impacts.

Hydrological Impacts

Three submissions express the opinion that the long-term effects of hydrological change due to harvesting in watersheds were not considered in the analysis. Two of these submissions note that current practices do not anticipate growth in public use of the water resource, for domestic or recreational purposes.

Harvest Levels and Flows

Four submissions point out that in recent years licensees in the Golden Timber Supply Area have not harvested their allocated allowable annual cuts. Two of these submissions suggest underharvesting is due to difficulty in locating wood, while one asks for an analysis of why the underharvest is occurring. The BC Environmental Network says the timber supply analysis does not reflect what is happening on the ground because the base case indicates a harvest level higher than what has been cut over the last five years when markets were good. They say current poor markets provide no

justification for excessively harvesting stands that are uneconomic to log and are needed for ecological integrity. Interact Wood Products says the full socio-economic potential of the allowable annual cut is not being realized, noting that Evans' six-year harvest (1992-1997) was 66 per cent of their average allowable cut for that period.

Two submissions question the assumption in the analysis that 100 per cent of the wood is equally available with oldest stands being harvested first. EKES says current practice is much more random and if random reality was modelled, it would lower short- and long-term timber supply. Parks Canada agrees that the assumption likely does not reflect reality and says that particularly in the northern portion of the timber supply area, factors such as terrain, access and avalanche hazard could constrain harvesting.

Non-Recoverable Losses

During input on the *Data Package*, Evans Forest Products expressed their opinion that losses due to wildfire were overstated. In their submission on the *Timber Supply Area Analysis Report*, Evans says a review of the impacts of the past year's experience is needed in order to confirm or change that opinion. Evans' submission says estimated losses to fringe damage from broadcast burning doesn't reflect current practice, which relies less on broadcast burning. They say volumes are usually salvaged, if harvestable.

Evans acknowledges the challenge in estimating losses but says assumptions should include the existence of increased access (providing opportunity for salvage logging and assisting in fire suppression), the decrease in access due to deactivation of roads, and the existence of more younger age classes which reduces catastrophic losses over time. Evans also notes the analysis model treats losses as clearcuts, which has additional negative impacts on timber supply due to cover constraints.

Three other submissions comment that volume losses may be underestimated, given recent fire events, the current level of activity associated with mountain pine beetle control and salvage, and the ongoing study of volume loss to armillaria root rot in second growth stands.

Socio-Economic Impacts

Two submissions describe the economic diversification occurring in Golden since the mill closure in 1996. They say any attempt to maintain an unacceptable and unobtainable timber supply does not reflect this community impetus. EKES says the community is prospering with current harvest levels, due to the major licensee developing a product line that requires much less wood. The society also maintains that the commodity BC has that is rare on the world market is large, high quality timber. They say if this wood continues to be allocated for immediate harvest (to convert to managed stands), the province will lose that advantage.

The BC Environmental Network notes the analysis does not use the new census data and does not include indicators of the current economic health of the community (school enrollment, housing market, new construction, new business, etc.) or a comparison of impacts predicted in the previous Timber Supply Review with the actual results of the 1996 mill closure.

Other Comments

Many submissions commented on factors or issues other than those specifically covered by Timber Supply Review documents. These comments are summarized in this section.

Timber Supply Review Process
Four submissions note that during the 1994 allowable annual cut determination, the chief forester directed district staff to complete four tasks. Only two have been completed. The submissions note that updating operability lines and preparation of a 20-year plan using spatial analysis are incomplete. Because of the importance of the latter, the BC Environmental Network asks that the Timber Supply Review be postponed until these tasks are completed.

Another submission suggests additional sensitivity analyses to be completed, including various alternative silvicultural systems, effects of intensive silviculture practices on medium and long-term volumes, and inclusion of deciduous species as a partitioned cut.

The BC Environmental Network and EKES' submissions ask that the Kootenay-Boundary Land Use Plan be declared a higher plan by the provincial government so the resulting management directions can be incorporated in the Timber Supply Review. Wood River Forest Inc. says the land use plan needs considerable review and adjustments. Evans Forest Products say there's a need to rationalize requirements of the land use plan that exceed those of the Forest Practices Code. Evans also recommends an aggressive research program on green-up ages, generated stand volume estimates and site productivity estimates.

EKES expresses the opinion that the timber supply analysis disregards and minimizes the importance of non-timber values and fails to steward both the public interest and the long-term interest of the Crown. The society says the "current practices" modelled in the analysis must include societal values, including retention of wildlife, biodiversity, connectivity and unroaded wilderness.

Parks Canada notes the difficulty of defining current practice in the aftermath of the Kootenay-Boundary Land Use Plan and the Forest Practices Code, and more recent directives intended to reduce timber supply impacts. The agency also maintains that spatial timber supply models have demonstrated that the model used in this timber supply review can greatly overestimate sustainable harvest levels.

Three submissions say the information in the *Data Package* was incomplete, making it difficult to comment on. Parks Canada encourages modelling at the landscape unit scale, rather than timber supply area, and expresses concern about the accuracy of timber supply models. They say the lack of spatial analysis, overestimation of mature and older stand volumes, and optimism about second-growth yields will lead to a poor estimate of a sustainable harvest level.

Harvest Levels
Twelve submissions express the opinion that the allowable annual cut should be maintained at current levels, in order to avoid serious economic impacts, improve industry stability, and protect employment. Evans Forest Products says there is no technical justification for a further reduction in the allowable annual cut.

Three submissions are of the opinion that the allowable annual cut should be reduced because of inadequate modelling of existing constraints and uncertainty about availability of wood on the ground, and to reduce the impact of future reductions and prepare the community, and to safeguard biodiversity values and wildlife habitat.

The ILMA's submission says the chief forester should increase the allowable annual cut to mitigate the hardships incurred as a result of the previous Timber Supply Review and because of the large number of uncertainties that exert an upward pressure on timber supply.

Interact Wood Products Ltd.'s submission suggests that, due to undercutting and the existence of a reserve, a new forest license with an allowable annual cut of 70,000 cubic metres could be supported. The company outlines the positive benefits in employment and government revenues, and asks that this license be advertised.

Appendix 1

Submissions received by the Columbia Forest District

Submissions received on the Data Package

Government agencies

Parks Canada (D. Petersen, Conservation Biologist)

Industry

Interior Lumber Manufacturers' Association
Evans Forest Products Ltd.

Interest groups

East Kootenay Environmental Society, Kimberley
East Kootenay Environmental Society, Golden

Consultants

Kindy Gosal, RPF, Storm Rider Ent.

Submissions received on the Timber Supply Analysis Report

Government agencies

Parks Canada (Yoho/Kootenay National Parks)
Parks Canada (Mt. Revelstoke/Glacier National Parks)

Industry

Interior Lumber Manufacturers' Association
Evans Forest Products Ltd.
Wood River Forest Inc.
Interact Wood Products Ltd.

Interest groups

East Kootenay Environmental Society, Golden Chapter
BC Environmental Network, Forest Caucus

Consultants

Denise English, RPF
Dieter Offermann, RPF

General public

Eight individual form letters